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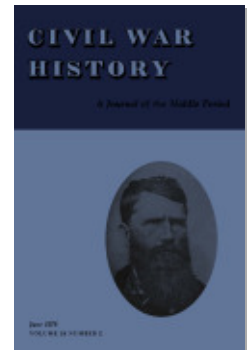
## Opiate Addiction as a Consequence of the Civil War

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# OPIATE ADDICTION AS A CONSEQUENCE OF THE CIVIL WAR

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David T. Courtwright

OPIATE ADDICTION INCREASED markedly in America during the latter half of the nineteenth century. Estimates of the magnitude and duration of that increase vary; it is likely, however, that there were at least 200,000 addicts by 1900.<sup>1</sup> Traditionally, a substantial measure of that increase has been attributed to the Civil War. Sick and wounded soldiers, liberally injected with morphine, frequently became addicted, as did many veterans who, in the course of treatment for war-related injuries, were also given opiates. Proponents of this view often refer to the fact that morphine addiction earned the sobriquet "the army disease."<sup>2</sup>

In recent years a number of authors have challenged the importance of the war as a cause of nineteenth century opiate addiction. The most skeptical of these, Mark A. Quinones, alleges that

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<sup>1</sup> The figure 200,000 is conservative; many estimates run higher. A useful review of the evidence bearing on the extent of opiate addiction is Lawrence Kolb and A. G. DuMez, "The Prevalence and Trend of Drug Addiction in the United States and Factors Influencing It," *Public Health Reports*, 39 (1924), 1179-1204.

<sup>2</sup> Among the numerous authors who have adopted some form of the traditional view of the Civil War as impetus to addiction are: John G. Bruhn, "Drug Use as a Way of Life," *Postgraduate Medicine*, 53 (1973), 185; Michael M. Cohen, "The History of Opium and the Opiates," *Texas Medicine*, 65 (1969), 78; Bingham Dai, *Opium Addiction in Chicago* (Montclair, New Jersey, 1970 reprint edition), 35; William Butler Eldridge, *Narcotics and the Law: A Critique of the American Experiment in Narcotic Drug Control*, 2nd ed. revised (Chicago, 1967), 4-5; Harris Isbell, "Historical Development of Attitudes Toward Opiate Addiction in the United States," in *Conflict and Creativity*, R. H. L. Wison and Seymour M. Farber (eds.), (New York, 1963), 157-158; Kenneth L. Jones, Louis W. Shainberg, and Curtis O. Byer, *Drugs and Alcohol* (New York, 1969), 67; John Kaplan, "A Primer on Heroin," in *Stanford Legal Essays*, John Henry Merryman (ed.), (Stanford, 1975), 279; Rufus King, *The Drug Hang-Up: America's Fifty Year Folly* (Springfield, Ill., 1972), 16; David C. Lewis and Norman E. Zinberg, "Narcotic Usage: II. A Historical Perspective on a Difficult Medical Problem," *New England Journal of Medicine*, 270 (1964), 1045; Peter D. Lowes, *The Genesis of International Narcotics Control* (Genève, 1966), 90; Jeannette Marks, "Narcotism and the War," *North American Review*, 206 (1917), 880; David W. Maurer and Victor H. Vogel, *Narcotics and Narcotic Addiction*, 4th ed. (Springfield, Ill., 1973), 8; Rolf E. Muuss, "Legal and Social Aspects of Drug Abuse in Historical Perspective: Is the Drug Abuser a Patient or a Criminal?" *Adolescence*, 9 (1974), 497; Earle V. Simrell, "History of Legal and Medical Roles in

the war was only "a convenient scapegoat for the growth of addiction in America."<sup>3</sup> The objections raised by Quinones and others involve essentially four points. First, addicted veterans are not mentioned as a distinct epidemiological group in the medical literature of the day. William H. Swatos, Jr., after examining a sample of nineteenth century journal articles, concluded, "No Civil War veterans were reported in these articles in such a way as to suggest that they formed a particular 'class' or group of addicts in the minds of these physicians."<sup>4</sup> If the war was such an important factor, one would have expected quite the opposite. The second objection to the traditional view is that the hypodermic method of administering morphine, which, because of its potency and rapidity of effect, is the technique most likely to lead to addiction, was uncommon during the war.<sup>5</sup> Morphine was applied topically, rather than injected. A third point involves opium import statistics, assumed to reflect domestic demand. The amount of opium imported per capita accelerated in the 1870's, rather than the late 1860's—timing which suggests that the events which triggered the increase in addiction transpired after the war.<sup>6</sup> Finally, it has been noted that surveys taken in the years following the war indicated that the majority of addicts in their respective locales were women.<sup>7</sup> Again, the traditional explanation would have led us to expect otherwise.

The foregoing represents, I trust, a fair summary of the controversy to date. The remainder of this article is a response to and a discussion of the four objections just outlined; I am especially concerned with testing them against solid historical evidence, something which has been lacking on both sides of the debate. In the end I hope to show that the war, although it was by no means the only factor, did contribute to the spread of opiate addiction in America.

The first issue, the prominence of the addicted veteran in the

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Narcotic Abuse in the U.S.," in *The Epidemiology of Opiate Addiction in the United States*, John C. Ball and Carl D. Chambers (eds.), (Springfield, Ill., 1970), 23; Glenn Sonnedecker, "Emergence of the Concept of Opiate Addiction," *Journal Mondial de Pharmacie*, No. 3 (1962), 289; and J. M. Stevenson, "Morphine," *Journal of the Indiana State Medical Association*, 64 (1971), 854.

<sup>3</sup> Mark A. Quinones, "Drug Abuse During the Civil War (1861-1865)," *International Journal of the Addictions*, 10 (1975), 1019.

<sup>4</sup> William H. Swatos, Jr., "Opiate Addiction in the Late Nineteenth Century: A Study of the Social Problem, Using Medical Journals of the Period," *ibid.*, 7 (1972), 749. Quinones reiterates Swatos' point at 1009.

<sup>5</sup> David F. Musto, *The American Disease: Origins of Narcotic Control* (New Haven, 1973), 1, 251 n. 2; Quinones, "Drug Abuse," 1009.

<sup>6</sup> Musto, *The American Disease*, 2; Quinones, "Drug Abuse," 1008, 1019.

<sup>7</sup> John C. Kramer, "Introduction to the Problem of Heroin Addiction in America," *Journal of Psychedelic Drugs*, 4 (1971), 16; Quinones, "Drug Abuse," 1018.

medical literature, is readily resolved. It is possible to document numerous references to addicted veterans, both as a class and as individuals. The earliest reference to addicted veterans as a group appears to be Horace B. Day's *The Opium Habit, with Suggestions as to the Remedy* (1868). "Maimed and shattered survivors from a hundred battle-fields," he wrote,

diseased and disabled soldiers released from hostile prisons, anguished and hopeless wives and mothers, made so by the slaughter of those who were dearest to them, have found, many of them, temporary relief from their sufferings in opium.<sup>8</sup>

These remarks were corroborated three years later by Boston druggists, writing in response to a statewide survey of the use of opium. One observed that "veteran soldiers who contracted the habit in the army hospitals are still addicted to the use of opium," while another stated that "Veteran soldiers, as a class, are addicted to it [opium]. . . ."<sup>9</sup> References to the war as an etiological factor persisted for decades. In 1898 J. B. Mattison, a leading authority on addiction, emphasized, in conjunction with the advent of hypodermic medication, the "vast amount of suffering from wounds and illness" incident to the war. In 1902 T. D. Crothers, another prominent student of the problem, remarked that, although veterans try to conceal the condition for fear of losing their pensions, many of them "became morphinists to relieve the pain and suffering following injuries received in the service. . . ."<sup>10</sup> While Professor Swatos is undoubtedly correct in stating that veterans were not depicted as an addict "class" in his particular *sample* of journal articles, an examination of the larger body of addiction literature reveals several references by acknowledged authorities to veterans as a group.

In addition to these general statements, the literature contains a number of case histories. Of course, recounting a few cases in no wise establishes the war as a significant etiological factor; it may help, however, in realizing the veteran addict as something more than an abstract type. Perhaps the most famous individual case is that of the anonymous Yankee author of *Opium Eating: An Autobiographical Sketch by an Habitué* (1876). As a consequence of deprivations suffered at Andersonville and other prisons, the

<sup>8</sup> [Horace B. Day, ed.,] *The Opium Habit, with Suggestions as to the Remedy* (New York, 1868), 7. This passage also appears, practically verbatim, in "Opium and the Opium Trade," *National Quarterly Review*, 20 (1870), 288.

<sup>9</sup> F. E. Oliver, "The Use and Abuse of Opium," Massachusetts State Board of Health, *Annual Report*, 3 (1872), 173-174. Musto (p. 251 n. 2) is incorrect when he asserts that Oliver's report "makes no mention of the recent conflict as the cause of addiction. . . ."

<sup>10</sup> J. B. Mattison, "Narcotic Inebriety in America," *North American Review*, 166 (1898), 254; T. D. Crothers, *Morphinism and Narcomanias from Other Drugs: Their Etiology, Treatment, and Medicolegal Relations* (Philadelphia, 1902), 75-76.

young soldier developed constant headaches and racking stomach pains. After discharge his doctor treated him with injections of morphine, to which he subsequently became addicted.<sup>11</sup> A similar case was reported by Crothers. The addict (also unnamed) first began taking opium to combat chronic diarrhea following a term of service during the war.<sup>12</sup> Leslie E. Keeley's *The Morphine Eater: or, From Bondage to Freedom* (1881) offers two cases: a wounded Wisconsin soldier, I. B. Hills, who took morphine during a lengthy convalescence, and an army surgeon, J. M. Richards, who began taking morphine in 1867 to treat chronic diarrhea.<sup>13</sup> More dramatic was the experience of an eighty-two-year-old Confederate veteran treated at Dr. Willis P. Butler's Shreveport morphine maintenance clinic (1919-1923). Shot in the head, he had been given morphine by an army doctor, and was still using the drug fifty-five years later.<sup>14</sup>

The second criticism of the concept of service-related addiction is that the hypodermic injection of morphine was uncommon during the war. One of the facts which gives the traditional view great plausibility is that the Civil War was the first major conflict in which the potent syringe, perfected in the 1850's, was available. However, both Quinones and David F. Musto counter by claiming that Civil War doctors more often rubbed or dusted morphine into wounds, rather than injected it.<sup>15</sup>

In seeking documentation that would either confirm or deny this last assertion I have unearthed a mass of contradictory testimony

<sup>11</sup> Anon., *Opium Eating: An Autobiographical Sketch by an Habitué* (Philadelphia, 1876), especially 50-60.

<sup>12</sup> T. D. Crothers, "New Sources of Danger in the Use of Opium," *Journal of the American Medical Association*, 35 (1900), 339.

<sup>13</sup> Leslie E. Keeley, *The Morphine Eater: or, From Bondage to Freedom* (Dwight, Ill., 1881), 112, 163. Keeley wrote this book primarily to promote his "double chloride of gold" formula for opiate addiction. While we may doubt the permanence of Keeley's cure, there is no reason to suspect the veracity of his summaries of the patients' previous histories.

<sup>14</sup> Dan Waldorf, et al., *Morphine Maintenance: The Shreveport Clinic, 1919-1923* (Washington, 1974), 20.

<sup>15</sup> Note 5, above. Both Quinones and Musto use as authority Stewart Brooks' *Civil War Medicine* (Springfield, Ill., 1966), which states, without documentation, that "... morphine sulfate was dusted directly into wounds and sometimes injected hypodermically." (p. 65) Later Brooks adds that morphine sulfate was also "rubbed right into the raw tissue or occasionally injected." (p. 88) He does not elaborate on the key adverbs, "sometimes" and "occasionally."

Generally speaking, there is little in the secondary accounts which deals with this problem. Norman Howard-Jones' excellent article, "A Critical Study of the Origins and Early Development of Hypodermic Medication," *Journal of the History of Medicine and Allied Sciences*, 2 (1947), 201-249, unfortunately fails to discuss the Civil War, while the two leading studies of Civil War medicine, H. H. Cunningham's *Doctors in Gray: The Confederate Medical Service* (Baton Rouge, 1958) and George Worthington Adams, *Doctors in Blue: The Medical History of the Union*

on the role of the hypodermic syringe in the war. To begin with the only figures available, 2,093 hypodermic syringes were officially issued to Union Army doctors.<sup>16</sup> Assuming that there were 11,000 such doctors,<sup>17</sup> and one syringe per doctor, then roughly 19 per cent of Union Army physicians were capable of administering morphine hypodermically. Of course, this does not take into account capture and breakage, or the fact that the syringes may have been issued relatively late in the war. On the other hand, it is highly probable that some physicians procured syringes privately, or that the scarce syringes were shared, say, by the staff of a field hospital. Given these imponderables, I hesitate to make a firm estimate of the number of Union doctors with access to hypodermic medication; it is virtually certain, however, that they were in the minority. Assessing the Confederate side is even more difficult, thanks to the destruction of the archives of the Confederate Surgeon-General's Office in the 1865 Richmond fire. However, based on what we know about the South's difficulty in procuring other medical and surgical instruments,<sup>18</sup> it seems safe to say that even fewer Confederate physicians were capable of injecting morphine.

Recollections of individual physicians differ about the prevalence of the syringe. In 1905 John Shaw Billings, distinguished surgeon, scholar, and medical bibliographer, noted that he was one of the few doctors to possess the instrument at the beginning of the war. He also stated that the hypodermic syringe was "in constant requisition." Apparently demand outstripped supply. Neurologist William W. Keen recalled, "We had no hypodermic syringes at the beginning of the war, and they were not in common use till some years after its conclusion." Yet Keen's colleague and collaborator,

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*Army in the Civil War* (New York, 1952), fail generally to discuss hypodermic medication. Adams does state in an earlier article, "Confederate Medicine," *Journal of Southern History*, 6 (1940), 156, that Confederate doctors had no hypodermic syringes, but his first source, Mathew A. Reasoner, "The Development of the Medical Supply Service," *Military Surgeon*, 63 (1928), 4, is a secondary one, and a check reveals that Reasoner offered no specific evidence for his claim that the syringe was not "generally employed" in the Civil War. Adams' second source, the recollections of J. C. Abernathy ("Manual of Military Surgery for the Army of the Confederate States," *Southern Practitioner*, 24 [1902], 678), evidently applies only to the knowledge and practices of the small group of surgeons who authored the Confederate *Manual of Military Surgery*. Otto Eisenschiml, "Medicine in the War," *Civil War Times Illustrated*, 1, No. 2 (1962), 5, asserts that "Hypodermic syringes were rarely used until later in the war . . .," but, again, without documentation. In short, I know of no thorough study of hypodermic medication in the Civil War based on primary sources.

<sup>16</sup> U.S. War Department, *Annual Report of the Secretary of War, 1866*, in *House Executive Documents*, Vol. 3 (serial 1285), 39 Cong., 2 sess., 386.

<sup>17</sup> Adams, *Doctors in Blue*, 9.

<sup>18</sup> Cunningham, *Doctors in Gray*, 157-159.

Silas Weir Mitchell, stated that *forty thousand* morphine injections were given in the course of a single year at the U.S. Army Hospital for Nervous Diseases, Turner's Lane, Philadelphia, the institution at which the two men worked. That two brilliant neurologists, stationed at the same hospital and engaged in the same specialized research, should offer such disparate accounts is puzzling, to say the least. But if Mitchell's estimate of the number of injections is even half correct, it seems impossible that a substantial portion of the patients at the Turner's Lane Hospital, suffering "every kind of nerve wound, palsies, choreas, [and] stump disorders," did not end the war as addicts.<sup>19</sup>

Even the standard official account, *The Medical and Surgical History of the War of the Rebellion*, contains contradictory statements. In a passage on peritoneal inflammation one finds the flat declaration, "The hypodermic syringe had not yet found its way into the hands of our officers."<sup>20</sup> Yet in the section on abdominal wounds, we are told that morphine was given hypodermically "in the numerous cases of this class in which the stomach rejected all medicine."<sup>21</sup> Similarly, it is recorded that morphine injections were "frequently" employed to allay the pain of chest wounds.<sup>22</sup>

In light of this contradictory testimony judgment must be deferred. Perhaps we will never know the true extent of hypodermic medication in the Civil War. But, for the purpose of establishing the war as a factor in the spread of opiate addiction, it may not be necessary. By focusing on subcutaneous morphine use, both sides in the debate have tended to overlook a simple fact: one can also become addicted to opium taken orally. Although the prevalence of morphine injection remains unclear, there can be no doubt about the opium pill: it was ubiquitous. Nearly 10 million of them were issued to the Union Army, along with over 2,841,000 ounces of other opium preparations, including powdered opium, powdered opium with ipecac, tincture of opium (laudanum), and camphorated tincture of opium (paregoric).<sup>23</sup> By contrast, only 29,828 ounces

<sup>19</sup> John S. Billings, "Medical Reminiscences of the Civil War," W. W. Keen, "Surgical Reminiscences of the Civil War," and S. Weir Mitchell, "Some Personal Recollections of the Civil War," all in *Transactions of the College of Physicians of Philadelphia*, 3rd Series, 27 (1905), 115-116, 109, and 91-92, respectively.

<sup>20</sup> U.S. War Department, Office of the Surgeon General, *The Medical and Surgical History of the War of the Rebellion* (hereafter *MSH*), Part III, Vol. I (Washington, 1888), 547.

<sup>21</sup> *Ibid.*, Part II, Vol. II, 207.

<sup>22</sup> *Ibid.*, Part I, Vol. II, 646.

<sup>23</sup> *Annual Report of the Secretary of War, 1866*, 385. *MSH*, Part III, Vol. I, 966, gives slightly different figures. Note that about half of the opium pills also contained camphor. See also George Winston Smith, *Medicines for the Union Army* (Madison, Wisc., 1962), 2, 77 n. 14.

of morphine sulfate were issued.<sup>24</sup> The amounts of opiates available to Confederate forces are, again, less certain. Drugs had to be acquired either through blockade running, "internal trade," capture, or domestic cultivation—chancy propositions all. Nevertheless, at least until the last year of the war, Confederate doctors were reasonably well supplied with the basic drugs.<sup>25</sup> The fact that opiates were contraband did not keep them from Southern soldiers.

Owing to its effectiveness as an analgesic, opium was given "almost universally in all cases of severe wounds," and liberally administered to victims of gangrene.<sup>26</sup> Doctors on both sides also prescribed it for diarrhea and dysentery, and in conjunction with quinine for malaria.<sup>27</sup> The following passage from the reminiscences of Confederate Assistant Surgeon William H. Taylor gives some idea of how readily opium was dispensed for intestinal disorders:

On the march my own practice was of necessity . . . simplified. . . . In one pocket of my trousers I had a ball of blue mass [a preparation containing powdered mercury], in another a ball of opium. All complainants were asked the same ques-

<sup>24</sup> *Annual Report of the Secretary of War, 1866*, 385. *MSH*, Part III, Vol. I, 966, gives 27,200 ounces.

<sup>25</sup> This is the conclusion of Cunningham, *Doctors in Gray*, 159-160. For more on Confederate medical supply problems, see Adams, "Confederate Medicine," 154-156; Brooks, *Civil War Medicine*, 66-70; Norman Henry Franke, *Pharmaceutical Conditions and Drug Supply in the Confederacy* (Madison, Wisc., 1955), *passim*; W. T. Grant, "Indigenous Medical Plants," *Confederate States Medical and Surgical Journal*, 1 (1864), 84-86; "Indigenous Remedies of the South," *ibid.*, 106-108; Mary Elizabeth Massey, *Ersatz in the Confederacy* (Columbia, 1952), 115-123; and Ralph Molyneux Mitchell II, "Improvisation, Adaptation, and Innovation: The Handling of Wounded in the Civil War" (M. A. Thesis, Rice University, 1975), 1-28. There is a consensus that quinine, rather than morphine or opium, was the drug most likely to be in short supply.

<sup>26</sup> *MSH*, Part I, Vol. II, 645. For representative cases of gun shot wounds in which opiates were administered orally, see M. J. De Rosset, "Read's Case of Excision of Knee-Joint," Benjamin F. Fessenden, "Report of Surgical Cases in General Hospital, Fayetteville, North Carolina," and P. F. Browne, "Gun-Shot Wound of the Chest Treated by Hermetically Sealing," all in *Confederate States Medical and Surgical Journal*, 1 (1864), 83-84, 116, and 164, respectively.

The use of opium in the treatment of gangrene is mentioned in Joseph Jones, "Investigations Upon the Nature, Causes, and Treatment of Hospital Gangrene, as it Prevailed in the Confederate Armies, 1861-1865," in *Surgical Memoirs of the War of the Rebellion*, II, Frank Hastings Hamilton (ed.), (New York, 1871), 559, and Hargrove Hinkley, "Treatment of Hospital Gangrene," *Confederate States Medical and Surgical Journal*, 1 (1864), 131-132.

<sup>27</sup> *MSH*, Part II, Vol. I, 735-750, Part III, Vol. I, 182, 186; Adams, *Doctors in Blue*, 226-228; Cunningham, *Doctors in Gray*, 187; Jones, "Investigations," 559. John B. Beck, *Lectures on Materia Medica and Therapeutics, Delivered in the College of Physicians and Surgeons of the University of New York*, 3rd ed. (New York, 1861), 368-369, explains that opium was given "to arrest or modify the paroxysm[s]" of intermittent fever, or malaria. Opiates were used to treat diarrheal diseases primarily because of their constipating qualities.



tion, "How are your bowels?" If they were open, I administered a plug of opium; if they were shut, I gave a plug of blue mass.<sup>28</sup>

One of Taylor's Northern counterparts, Surgeon Major Nathan Mayer, devised a comparable system. With a bottle of morphine powder in one pocket, quinine in the other, and whiskey in his canteen, Mayer did most of his diagnosing from horseback. When he wished to dispense morphine, he would pour out an "exact quantity," and then let the soldier lick it from his hand.<sup>29</sup>

The frequency and casualness with which opiates were administered, illustrated so vividly in the memoirs of Taylor and Mayer, reflect, not the excess of two individual surgeons, but the practice of an entire generation of physicians.<sup>30</sup> Army doctors routinely dispensed opium to soldiers because as civilian doctors they routinely dispensed opium to civilians. Opium was, in the words of *The Dispensatory of the United States* (1834), "more frequently prescribed than perhaps any other article in the Materia Medica."<sup>31</sup> In an age of few genuinely effective therapeutic techniques, doctors were forced to fall back onto symptomatic relief, and opium, with its excellent analgesic and tranquilizing properties, was the obvious palliative. Even the famous therapeutic skeptic, Oliver Wendell Holmes, Sr., praised opium as the one medicine "which the Creator himself seems to prescribe."<sup>32</sup>

Given the importance of the drug in the nineteenth century physician's armamentarium, then, it is not surprising that army doctors responded to massive disease and injury by administering massive amounts of opium. From the standpoint of addiction, this practice was most dangerous when the disease or injury treated was chronic in nature. A necessary (but not sufficient) condition for opiate addiction is *physical dependence*, that is, the metabolic state in which

<sup>28</sup> William H. Taylor, "Some Experiences of a Confederate Assistant Surgeon," *Transactions of the College of Physicians of Philadelphia*, 3rd Series, 28 (1906), 105.

<sup>29</sup> Stanley B. Weld (ed.), "A Connecticut Surgeon in the Civil War: The Reminiscences of Dr. Nathan Mayer," *Journal of the History of Medicine and Allied Sciences*, 19 (1964), 278-279.

<sup>30</sup> When I speak of physicians here, I mean to refer primarily to regular practitioners or "allopaths." Sectarian practitioners—Thomsonians, homeopaths, eclectics, and others—deemphasized or dropped opiates completely.

<sup>31</sup> George B. Wood and Franklin Bache, *The Dispensatory of the United States of America*, 2nd ed. (Philadelphia, 1834), 486. See also Jonathan Pereira, *The Elements of Materia Medica and Therapeutics*, 3rd American ed., Joseph Carson (ed.), (Philadelphia, 1854), 1046-1052, for a representative discussion of the numerous uses of opium. Morphine was also administered orally before the Civil War but, owing to its expense and relative novelty, it was used less often than opium. William C. Smith, *An Inaugural Dissertation on Opium, Embracing Its History, Chemical Analysis, and Use and Abuse as a Medicine* (New York: 1832), 16.

<sup>32</sup> Oliver Wendell Holmes, Sr., *Medical Essays, 1842-1882* (Boston, 1891), 202.

discontinuation of the drug will bring on withdrawal symptoms—lacrimation, running nose, sweating, cramps, and so forth. In order to become physically dependent, one must consume the drug continuously over a period of time, about two weeks.<sup>33</sup> Thus the danger of addiction is greatest when opiates are used to treat chronic disorders. Diarrhea, dysentery, and malaria, the most common camp diseases, produced thousands of chronic sufferers,<sup>34</sup> to whom opium, as we have seen, was freely administered. In sum, the argument for the Civil War as a cause of the increase in opiate addiction need not rest solely on the availability of hypodermic medication; vast quantities of opium preparations other than morphine were dispensed under circumstances which could very easily lead to addiction. Moreover, veterans afflicted with lingering disease or injury might also become addicted after the war, especially if they fell into the hands of a hypodermic-wielding physician. In either event the war was ultimately responsible.

The third criticism of the traditional position centers, not on opium consumed during the war, but after it. Musto observes that the rapid rise in per capita importation of opium did not commence until the 1870's; imports in the years immediately after the war were approximately the same as those immediately before the war.<sup>35</sup> The inference is that the war had little or nothing to do with the increase. This inference is invalid for two reasons. First, as just pointed out, not all veterans who became addicted did so in the 1860's; those who did not succumb until the 1870's would obviously not be reflected in increased imports of opium until that time. A second and more serious flaw in Musto's argument involves the duty on imported crude opium which, at \$2.50 a pound, was inordinately high in the late 1860's—higher, in fact, than at any other time in the nineteenth century. When the tariff on any form of opium was set too high, smugglers responded by organizing illicit traffic.<sup>36</sup> Thus much more opium entered the country in the

<sup>33</sup> The two week time is an arbitrary one, chosen only for purposes of illustration. The actual span will vary with the individual, his expectations, the form of opium used, method of administration, and the circumstances under which the drug is taken.

<sup>34</sup> Paul E. Steiner, *Disease in the Civil War: Natural Biological Warfare in 1861-1865* (Springfield, Ill., 1968), 16-22; "Consolidated Report[s] of the Sick and Wounded of the Confederate Army," Box 19, Folders 5-8, Joseph Jones Collection, Special Manuscripts Division, Howard-Tilton Memorial Library, Tulane University.

<sup>35</sup> Musto, *The American Disease*, 2.

<sup>36</sup> Musto states that "smuggling did not severely modify the overall trends of opium importation" (p. 2), but there is a great deal of evidence which suggests otherwise. Smoking opium, because of its near-prohibitive tariff, was the form most likely to be smuggled. However, medicinal opiates, that is, crude opium or morphine or its salts, were also smuggled during those years when they were subject to an appreciable duty. This is evinced, first, by the negative correlation observable

late 1860's than customs returns indicate. It is significant that the increased importations to which Musto calls attention began only after the duty on crude opium was lowered to \$1.00 a pound on July 14, 1870. Official opium import statistics must be regarded more as a function of domestic tariff policy than as a mirror of domestic demand; they cannot be used to substantiate claims about the stability of opium consumption in the years immediately following the war.

The fourth and final argument, raised first by John C. Kramer in 1971, is based on post bellum statistics of a different sort. Surveys taken in Michigan in 1878, Chicago in 1880, and Iowa in 1885 revealed that 61.2, 71.9, and 63.4 per cent of the opiate addicts in their respective locales were female.<sup>37</sup> Such figures, Kramer observes, indicate that Civil War veterans could not have comprised a "predominant portion of the addicts."<sup>38</sup>

Here at last is a valid objection to, or, better, qualification of, the traditional view of the war as a major cause of the increase in opiate addiction. It is not that the war was irrelevant; rather, it is that the war was only one of several factors tending to increase the number of addicts. What emerges from the literature on nineteenth century opiate addiction is not one, but many, addict types. The most common type, as these surveys indicate, was female. Usually middle aged, middle or upper class, the female addict often became addicted in the course of treatment for such conditions as

between per capita imports of opium and duty (for all types of opium imported during fiscal 1843-1861 it was -.59; for imports of crude opium during fiscal 1866-1914, -.61) and, second, by cases of the organized smuggling of medicinal opiates which came to light, e.g., *New York Times*, Feb. 14, 16, 17, 1909; *Ibid.*, May 16, 1899, and Mar. 12, 1911, Part 5, 12; "Opium Smuggling on Our Northern Border," *Journal of the American Medical Association*, 11 (1888), 885; and Alonzo Calkins, *Opium and the Opium Appetite* (Philadelphia, 1871), 37.

<sup>37</sup> O. Marshall, "The Opium Habit in Michigan," *Michigan State Board of Health, Annual Report*, 6 (1878), 67; Charles W. Earle, "The Opium Habit: A Statistical and Clinical Lecture," *Chicago Medical Review*, 2 (1880), 442-443 and J. M. Hull, "The Opium Habit," *Iowa State Board of Health, Biennial Report*, 3 (1885), 539.

<sup>38</sup> Kramer, "Heroin Addiction," 16. Note, however, that the war did have an indirect impact on the number of female addicts. As Horace Day (note 8, above) pointed out, dead soldiers' widows and mothers assuaged their grief with opium. Keeley, *Morphine Eater*, 17, also believes that opiates were commonly used as tranquilizers, particularly in the South, where the disruption and shock of war were greatest.

It is unlikely, though, that war widows and mothers formed too large a percentage of female addicts. Descriptions of nineteenth century female opiate users almost invariably refer to a specific disorder, such as sciatica, for which they began taking the drug; "grief" as an etiological factor is seldom mentioned. (See, for example, the case histories in Fred Heman Hubbard, *The Opium Habit and Alcoholism* [New York: 1881].) War engendered grief, while undoubtedly a feature of some cases, cannot of itself explain the female preponderance. Thus, even when indirect effects are considered, it is clear that the Civil War cannot alone account for the spread of opiate addiction.

neuralgia, morning sickness, or painful menstruation. Women who, like Mary Boykin Chesnut,<sup>39</sup> laid in a regular supply of opiates with which to minister their daily aches and pains, or who used opiates as a semi-respectable substitute for alcohol, were also likely candidates for addiction. Another prominent type of addict is the nineteenth century physician who, owing to the ready availability of morphine and his own fatigue or insomnia, resorted too often to the syringe. Yet another pattern is that of opium smoking by white gamblers and prostitutes, a custom acquired from Chinese immigrants. The addicted veteran, in short, forms but one part of the complicated epidemiological picture of nineteenth century opiate addiction.

I will conclude by drawing together the several strands of analysis running through this study. The Civil War was a factor in the spread of opiate addiction in America. The evidence for this claim consists of references by contemporaries to addicted veterans, both as individuals and as a group, as well as official records and statements to the effect that large amounts of opium were administered orally for a variety of conditions, many of them chronic. Less clear is the prevalence and effect of hypodermic injections of morphine during the war, although they undoubtedly played some role. Also uncertain is whether the majority of addicted veterans actually became addicted in the army, or in later years, as a consequence of lingering disease or injury.

No basis exists for a precise estimate of the number of addicted veterans; we can be sure, however, that they comprised a minority of all addicts. Thus the traditional view of the problem as essentially an epidemic of "the army disease" is unjustified, but so too is Musto and Quinones' belief that the war was merely "a convenient event to blame for late 19th-century addiction."<sup>40</sup> Critics of the traditional view have some valid points, but, in making them, have overstated their case. Rather than dismissing the war as a "scapegoat," we should understand it as one of several causes contributing to the rapid increase of opiate addiction in late-nineteenth century America.

<sup>39</sup> Mary Boykin Chesnut, *A Diary from Dixie*, Ben Ames Williams (ed.), (Boston, 1949), 84, 504-506.

<sup>40</sup> Musto, *The American Disease*, 251, n. 2; Quinones, "Drug Abuse," 1009.